

**ARIZONA WILLOW
CONSERVATION AGREEMENT AND STRATEGY**

APPENDIX C

**FISHLAKE NATIONAL FORESTS
LAND AND RESOURCE MANAGEMENT PLAN**

**APPLICABLE STANDARDS AND GUIDELINES
FOR THE MANAGEMENT OF ARIZONA WILLOW**

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Management Areas where Arizona willow populations are currently known from the Fishlake National Forest:

Management Prescription 4A - Emphasis is on fish habitat improvement.

*Fishlake Land and Resource Management Plan (LRMP) IV - 85

Emphasis is on fish habitat improvement where aquatic habitat is below productive potential. Habitat enhancement techniques may be used on lake, reservoir, river or stream habitats and their adjacent riparian ecosystems.

The goals of management are to maintain or improve aquatic habitat condition for fish at or above a good habitat condition rating, maintain stable stream channels, meet water quality standards for cold water fisheries, provide healthy, self-perpetuating riparian plant communities and provide habitats for viable populations of wildlife.

Management techniques that may be used include fencing and planting in riparian ecosystems, drop structures, bank stabilization structures, boulder placement, pool blasting, removal of fish barriers, construction of fish barriers, selective tree removal, lake aeration, aquatic weed control, non-game fish control, dam rehabilitation and maintenance of instream flows and conservation pools.

Livestock grazing is at a level that will assure maintenance of the vigor and regenerative capacity of the riparian plant communities as well as maintaining shade and bank stability for streams. Vehicular travel is limited on roads and trails at times when excessive stream sedimentation would result. New road construction is restricted within riparian areas unless no feasible alternative exists. Developed recreation facility construction for overnight used is prohibited within the 100-year floodplain.

Forest riparian ecosystems are treated to improve wildlife and fish habitat diversity through specified silvicultural objectives.

*Fishlake LRMP IV - 86: 1.

- 1 **VISUAL RESOURCE MANAGEMENT** - Design and implement management activities which sustain inherent visual values of riparian areas and blend with the surrounding natural landscapes.

*Fishlake LRMP IV - 88: 5.

- 5 **RECREATION OPPORTUNITIES AND USE ADMINISTRATION** - Prohibit motorized vehicle use off forest system roads and trails (except snowmobiles operating on snow) where needed to protect soils, vegetation, or special wildlife habitat.

*Fishlake LRMP IV - 88: 1, 4.

- 1 **WILDLIFE HABITAT IMPROVEMENT AND MAINTENANCE** - Provide habitat diversity to meet or exceed Utah DWR population goals for all aquatic vertebrate species.
- 4 Maintain instream flows in cooperation with UDWR to support a sustained yield of natural fisheries resources.

*Fishlake LRMP IV - 88:1; IV - 89: 1 (cont); IV - 90: 2.

- 1 **RANGE RESOURCE MANAGEMENT** - Maintain proper stocking and livestock distribution to protect riparian ecosystems.

- a. Livestock grazing in riparian areas will be controlled at the following levels of utilization:

<u>Grazing System</u>	<u>Vegetation Class Condition</u>	<u>Total Forage Utilization By Weight</u>
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1. Grass/Grasslike Forb Vegetative Type:

Continuous	Good	40%
	Fair	30%
	Poor	20%
Rest-Rotation	Heavy Use Pasture ⁽¹⁾	60%
	Light Use Pasture	40%
Deferred-Rotation	Heavy Use Pasture ⁽²⁾	50%
	Light Use Pasture	35%

2. Willow/Grass/Grasslike Vegetative Type:

Continuous	Good	55%
	Fair	40%
	Poor	30%

3. Willow-Forest Vegetative Type:

Rest-Rotation	Heavy Use Pasture ⁽¹⁾	70%
	Light Use Pasture	50%
Deferred-Rotation	Heavy Use Pasture ⁽²⁾	60%
	Light Use Pasture	40%

¹ Trampled areas and streambank damage caused during heavy use year should be healed or stabilized within the following rest year.

² Bare soil caused by disturbance in a heavy use pasture should be stabilized or healed prior to use the following year.

Browse utilization within the riparian ecosystem will not exceed 50% of new leader production.

The limiting factor on a given riparian area will be whichever utilization standard is reached first, either total forage or browse.

- 2 Prohibit trailing of livestock along the length of riparian areas except where existing stock driveways occur. Rehabilitate existing stock driveways where damage is occurring in riparian areas. Relocate them outside riparian areas if possible, and if necessary to achieve riparian area goals.

*Fishlake LRMP IV - 91: 6.

- 6 **SILVICULTURAL PRESCRIPTION** - Prohibit log landing and decking areas within the riparian area.

*Fishlake LRMP IV - 91: 2, 3, 3b, 4, 5, 6, 7, 8.

- 2 **WATER RESOURCE IMPROVEMENT AND MANAGEMENT** - Prevent stream channel instability, loss of channel cross-sectional areas, and loss of water quality resulting from activities that alter vegetative cover.

- 3 Determine the effects on water quality and sediment yields from vegetation manipulation and road construction projects through the use of appropriate modeling and quantification procedures.
- 3b Maintain at least 80 percent of potential ground cover within 100 feet from the edges of all perennial streams, lakes and other waterbodies, or to the outer margin of the riparian ecosystem, where wider than 100 feet.
- 4 Avoid channelization of natural streams. Where channelization is necessary for flood control or other purposes, use stream geometry relationships to re-establish meanders, width/depth ratios, etc. Consistent with each major stream type.
- 5 Treat areas disturbed by management activities to reduce erosion to natural rates.
- 6 Stabilize streambanks, which are damaged by management activities, with methods that emphasize revegetation.
- 7 Design and locate settling ponds to reduce downstream sediment yield and to prevent washout during high water. Locate settling ponds outside of the active channel. Restore any channel changes to hydraulic geometry standards for each stream type.
- 8 Include wildlife and fish habitat, aesthetic, and safety goals when planning projects that result in vegetation type conversion.

*Fishlake LRMP IV - 92: 1; IV - 93: 2, 3.

- 1 **SOIL RESOURCE MANAGEMENT** - Rehabilitate disturbed soils areas where adverse impacts would occur according to the following priorities:
 - Aquatic ecosystems;
 - Riparian ecosystems; and
 - Riparian areas outside of aquatic and riparian ecosystems.
- 2 Prevent soil surface compaction and disturbance in riparian ecosystems. Allow use of heavy construction equipment for construction, residue removal, etc. only during periods when the soil is least susceptible to compaction or rutting.
- 3 Maintain or enhance the long-term productivity of soils within the riparian ecosystem.

*Fishlake LRMP IV - 93: 1, 1b, 2, 3.

- 1 **MINING LAW COMPLIANCE AND ADMINISTRATION** - Minimize detrimental disturbance to the riparian area by mineral activities. Initiate timely nd

effective rehabilitation of disturbed areas and restore riparian areas to a state of productivity comparable to that before disturbance.

- 1b Locate the lower edge of disturbed or deposited soil banks outside the active floodplain.
- 2 Locate mineral removal activities away from the water's edge or outside the riparian area.
- 3 Design and locate placer mine settling ponds to prevent washout during high water. Locate settling ponds outside of the active channel. Restore any channel changes to hydraulic geometry standards for each stream type.

Management Prescription 6B - Emphasis is on livestock grazing.

***Fishlake LRMP IV - 109**

Range resource management level D (intensive management) is applied. This involves use of structural and non-structural improvements with associated maintenance. Any grazing system can be applied which is consistent with maintaining the environment and providing for multiple use of the range. Condition is improved through use of vegetation and soil restoration practices, improved livestock management, and regulation of other resource activities. Investment in structural and non-structural improvements is moderate to high. Structural improvement benefit or at least do not adversely affect wildlife. Non-structural restoration and forage improvement practices available are seeding, planting, burning, fertilizing, pitting, furrowing, spraying, crushing, plowing, and chaining.

Investments are made in compatible resource activities. Dispersed recreational opportunities vary between semi-primitive non-motorized and roaded natural. Management activities are evident but harmonize and blend with the natural setting.

***Fishlake LRMP IV - 112: 4.**

- 4 **RECREATIONAL OPPORTUNITIES AND USE ADMINISTRATION** - Prohibit motorized vehicle use off forest system roads and trails (except snowmobiles operating on snow) where needed to protect soils, vegetation, or special wildlife habitat.

***Fishlake LRMP IV - 112: 1**

- 1 **WILDLIFE AND FISH RESOURCE MANAGEMENT** - Maintain habitat capability for management indicator species.

Listed below are "General Direction" standards and guidelines found within the Fishlake LRMP that provide further resource protection to Arizona willow populations:

FOREST DIRECTION GOALS

*Fishlake LRMP IV - 3: 4.

- 3 - **WILDLIFE AND FISH** - Identify and improve habitat for sensitive, threatened and endangered species including participation in recovery efforts for both plants and animals.

*Fishlake LRMP IV - 4: 2, 3.

- 2 **RANGE** - Maintain range lands being used by livestock in at least fair condition with stable or upward trend through the use of proper management and restoration measures.
- 3 Encourage permittees to assume greater responsibility and latitude in managing permitted grazing use.

*Fishlake LRMP IV - 4: 4.

- 4 **SOIL AND WATER** - Maintain productive streams, lakes, and riparian areas and mitigate hazards on floodplains.

*Fishlake LRMP IV - 19: 5, 6.

- 5 **WILDLIFE AND FISH RESOURCE MANAGEMENT** - Manage and provide habitat for recovery of endangered and threatened species.
- 6 Do not allow activities or practices that would negatively impact endangered, threatened, or sensitive plant or animal species.

*Fishlake LRMP IV - 21: 2; IV - 23: 3.

- 2 **RANGE RESOURCE MANAGEMENT** - Manage livestock and wild herbivores forage use by implementing proper use guides.
- 3 Achieve or maintain fair or better range conditions on all rangelands used by livestock.

*Fishlake LRMP IV - 33: 1, 1b; IV - 34: 2, 3, 4, 4A, 4a, 5.

- 1 **RIPARIAN AREA MANAGEMENT** - Special protection and management will be given to floodplains, wetlands, and all land and vegetation for a minimum of 100 feet from the edges of all perennial streams, lakes and other bodies of water or to the outer margin of the riparian ecosystem if wider than 100 feet.
- 1b Maintain riparian dependent resource values including wildlife, fish, vegetation, watershed, and recreation in a stable or upward trend.
- 2 Design and implement activities in management areas to protect and manage the riparian ecosystem.
- 3 Prescribe livestock grazing systems to achieve riparian area objectives along streams capable of supporting self-sustaining fisheries.
- 4 Prescribe silvicultural systems to achieve riparian area objectives.
- 4A Prohibit the operation of motorized equipment within the riparian area except at constructed stream crossings.
- 4a Maintain shade, bank stability and sediment standards as specified under wildlife and fish resource management standards and guidelines.
- 5 Locate and construct arterial and collector roads to maintain the basic natural condition and character of riparian areas.

*Fishlake LRMP IV - 35: 2, 4.

- 2 **WATER USES MANAGEMENT** - Protect water right applications of others when such uses will lower streamflows below levels acceptable for national forest uses and purposes.
- 4 Determine and obtain rights to other surface and ground waters to meet multiple use requirements.

*Fishlake LRMP IV - 35: 4, 4a; IV - 36: 5.

- 4 **WATER RESOURCE IMPROVEMENT AND MAINTENANCE** - Rehabilitate disturbed areas that are contributing sediment directly to perennial streams as a result of management activities to maintain water quality and re-establish vegetation cover.

- 4a Reduce to natural rate any erosion due to management activity through necessary mitigation measures such as water-barring and revegetation. Rehabilitation measures will be implemented within one year of the activity.
- 5 Limit use of herbicides, insecticides, rodenticides, or other chemical agents as part of terrestrial management activities to times and places where possible transport to or by surface water has a low probability of occurrence. Follow all label requirements concerning water quality protection.

*Fishlake LRMP IV - 36: 1.

- 1 **MINING LAW COMPLIANCE AND ADMINISTRATION** - Minimize or, as appropriate, prevent adverse impacts on surface resources.

*Fishlake LRMP IV - 39: 2, 3C, 3D; IV - 40: 4D.

- 2 **RIGHTS-OF-WAY AND LAND ADJUSTMENT** - Insure floodplain and wetland values are approximately equal on both offered and selected tracts in proposed land exchanges or that values are in favor of the United States.
- 3C Lands which provide habitat for threatened and endangered species of animals and plants.
- 3D Lands which include floodplain or wetlands.
- 4D When critical or unique resource (wetlands, floodplains, essential big game winter range, threatened or endangered species habitat, historical or cultural resources, critical ecosystems, etc.) Effects are mitigated by reserving interests to protect the resource, or by exchange where other critical resources to be acquired are considered to be of equal or greater value.

*Fishlake LRMP IV - 42: 1, 1D, 1E, 1I.

- 1 **SOIL RESOURCE MANAGEMENT** - Maintain soil productivity, minimize man-caused soil erosion, and maintain the integrity of associated ecosystems.
- 1D Revegetate all areas, capable of supporting vegetation, disturbed during road construction and/or reconstruction to stabilize the area and reduce soil erosion. Where practicable use less palatable plant species on cuts, fills, and other areas subject to trampling damage by domestic livestock and big game to discourage grazing.
- 1E Prevent livestock and wildlife grazing which reduces the percent of plant cover to less than the amount needed for watershed protection and plant health.

- 1I Restore soil disturbance caused by human use to soil loss tolerance levels commensurate with the natural ecological processes for the treatment areas.

*Fishlake LRMP IV - 46: 2B.

- 2B **TRAIL SYSTEM MANAGEMENT** - Maintain drainage structures to prevent unacceptable resource damage.

*Fishlake LRMP IV - 49: 2, 3.

- 2 **VEGETATION TREATED BY BURNING** - Limit use of prescribed fires on areas adjacent to riparian areas to protect riparian and aquatic values.
- 3 Use unplanned ignition on areas identified in this plan to achieve management objectives.

*Fishlake LRMP IV - 49: 1.

- 1 **INSECT AND DISEASE MANAGEMENT** - Prevent or suppress epidemic or threatening insect and disease populations with an integrated pest management (IPM) approach consistent with resource management objectives.

